

Subb1

1. (Amended) A method for negotiating an exchange of image

processing functionality between first and second devices over a bi-directional communication link, comprising the steps of:

exchanging function code descriptions between the first and second devices, the function code descriptions including information concerning functionality respectively available in the first and second devices, together with information concerning whether such functionality is exportable to other devices;

negotiating an assignment of image processing functionality between the first and second devices, with the overall image processing functionality effecting an efficient image transfer between the first and second devices; and

exchanging program code that implements image processing functionality between the first and second devices in a case where the negotiated assignment indicates that functionality in one of the first and second devices is needed by the other of the first and second devices, wherein the program code is executed by the other of the first and second devices.

2. (Unamended From Previous Version) A method according to Claim

1, further comprising the step of transferring image data from the first device to the second device using the negotiated assignment of functionality, including functionality that has been exported from one device to the other.

3. (Unamended From Previous Version) A method according to Claim

1, wherein said step of negotiating an assignment of functionality includes the steps of:

determining alternative processing sequences for image data transfer;

applying a cost function to each alternative; and
selecting the alternative with the lowest cost function.

4. (Unamended From Previous Version) A method according to Claim 3, wherein said cost function contemplates both image transfer time and image quality.

5. (Unamended From Previous Version) A method according to Claim 1, further comprising the step of obtaining function code descriptions for functionality in a repository of image processing functionality, wherein said step of negotiating to assign functionality includes the step of negotiating in respect of the image processing functionality exported from the repository, and wherein said step of transferring functionality includes the step of transferring functionality from the repository.

6. (Unamended From Previous Version) A method according to Claim 5, wherein said first and second devices retain transferred functionality for use in connection with subsequent image processing jobs.

7. (Unamended From Previous Version) A method according to Claim 1, wherein said first and second devices retain transferred functionality for use in connection with subsequent image processing jobs.

8. (Amended) A network interface card for interfacing between an image processing device and a local area network, said network interface card including:

a network protocol stack for interfacing between the local area network and the network interface card, and for receiving network communications directed to the image processing device;

a device-specific application layer that provides device-specific image processing functionality for driving the image processing device, the device-specific application layer receiving network communications directed to the device from the protocol stack; and

a negotiation controller for negotiating an exchange of image processing functionality with another device on the local area network, the negotiation controller being programmed with process steps according to the method of any one of Claims 1 to 7.

9. (Unamended From Previous Version) Computer-executable process steps stored on a computer readable storage medium, the computer executable process steps for negotiating an exchange of image processing functionality between first and second devices over a bi-directional communication link, said computer executable process steps including steps according to any of Claims 1 to 7.

10. (Unamended From Previous Version) A storage medium for storing computer executable process steps to effect negotiation of an exchange of image processing functionality between first and second devices over a bi-directional communication link, said process steps including steps according to any of Claims 1 to 7.

Please add the following new claims:

Claim 11
11. (New) A network interface card for interfacing between a network and an image processing apparatus, the network interface card comprising:

an exchanger adapted to exchange a function description with an external device, the function description including information concerning functionality respectively available in the image processing apparatus and the external device;

a negotiator adapted to negotiate an assignment of image processing functionality between the image processing apparatus and the external device; and

an exporter adapted to export program code that implements image processing functionality to the external device for execution thereon in a case that the negotiated assignment of image processing functionality indicates that functionality is needed by the external device.

12. (New) A network interface card according to Claim 11, further comprising a transmitter adapted to transmit image data to the external device based on the negotiated assignment of functionality.

13. (New) A network interface card according to Claim 11, further comprising a receiver adapted to receive program code that implements image processing functionality from the external device in a case that the negotiation indicates that image processing functionality is needed by the image processing apparatus.

14. (New) An image processing apparatus comprising:
an exchanger adapted to exchange function descriptions with the external device, the function descriptions including information concerning image processing functionality respectively available in the image processing apparatus;

a negotiator adapted to negotiate an assignment of image processing functionality between the image processing apparatus and the external device; and an exporter adapted to export program code that implements image processing functionality to the external device for execution thereon in a case that the negotiated assignment of image processing functionality indicates that functionality is needed by the external device.

15. (New) An image processing apparatus according to Claim 14, further comprising an image data transmitter adapted to transmit image data to the external device based on the negotiated assignment of functionality.

16. (New) An image processing apparatus according to Claim 14, further comprising a receiver adapted to receive program code that implements image processing functionality from the external device in case that the negotiation indicates that functionality is needed in the image processing apparatus.